



Caltrans Division of Research,  
Innovation and System Information

# Research Results

Design/  
Construction

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**Project Title:**

Balancing Workload and Resources  
in Capital Programs: A Survey of  
Practices in Caltrans and Selected State  
Departments of Transportation

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## Comparing In-House Staff to Consultants to Balance Workload Needs

*Outsourcing can address staff shortages and provide specialized  
expertise to complete capital projects*

### WHAT WAS THE NEED?

The Caltrans Capital Outlay Support (COS) program calculates the annual resource workload needs to complete capital projects on the state highway system based on work plans submitted by the districts. Balancing the workload and resources for the various projects across the state is challenging. Projects might have overlapping deadlines or a need to be expedited, causing them to compete for staff time. Some projects require experts with specialized skills not available in-house, and others might be affected by seasonal fluctuations. Hiring consultants to handle the spikes and areas that require specific expertise can provide stability. To help understand the different needs of the state districts and transportation agencies and balance the resource mix during peaks and valleys, Caltrans explored the available options and tools for resource allocation.

### WHAT WAS OUR GOAL?

The goal was to examine the tools and practices employed by Caltrans and other state transportation agencies to balance the workload and resources to complete capital outlay projects on the state highway system.



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knowledge that improve  
California's transportation system.

## WHAT DID WE DO?

The researchers interviewed Caltrans staff to assess the factors that contribute to the decision to retain work in-house or seek the assistance of consultants and which tools and practices are currently employed. Those interviewed included people from budgeting, environmental departments, District 10, District 11, Central Region, North Region, labor relations, project management, and the Division of Engineering Services, which oversees the design and construction of structures throughout the state. A 13-question survey was also sent to the Georgia, Pennsylvania, Texas, and Washington departments of transportation (DOTs) to learn about the workload balancing practices employed by those DOTs.

## WHAT WAS THE OUTCOME?

Among the five state DOTs studied, California employs the highest percentage of state staff to complete capital projects. The other participating DOTs outsource considerably more to consultants. Although local circumstances influence the decisions made and practices followed when balancing the workload in capital programs, all the agencies agreed that it is important to retain key decision-making roles in-house, with most project manager and resident engineer positions filled with state staff. Costs do not appear to be the controlling factor in decisions to outsource at the state or local office level. Using consultants presents challenges, such as not being familiar with department policies and procedures, funding limitations, and invoicing standards.



## WHAT IS THE BENEFIT?

Balancing workload and resources is a complex process informed by state-level mandates, agency-level procedures, local practices, collaborations with other agencies, and the cost-effectiveness and availability of specialty services needed for particular projects. Each state agency is unique in how they allocate resources to complete COS projects based on the benefits gained. Outsourcing provides flexibility in personnel assignments and can retain stability in state staffing by using consultants to manage peak workloads, especially in remote areas, and help meet delivery commitments. Consultants offer access to specialized skills and expertise and updated technology, and often come fully equipped, not requiring state-supplied materials and equipment.

## LEARN MORE

To view the complete report:  
[www.dot.ca.gov/research/researchreports/reports/2013/final\\_report\\_task\\_2484.pdf](http://www.dot.ca.gov/research/researchreports/reports/2013/final_report_task_2484.pdf)

